

## Claims

### What is claimed:

1. A test tool to provide input to a media platform, comprising:
  - a processor associated with the test tool;
  - a memory coupled to the processor;
  - a program executable in connection with the processor and the memory, the program to test various media platform resources; and  
wherein to test the various media platform resources the program can receive a number of selectable input variables, the number of selectable input variables to simulate multiple application characteristics associated with a service application on the media platform.
2. The test tool of claim 1, wherein the number of selectable input variables represent configurable media platform resources.
3. The test tool of claim 1, wherein the number of selectable input variables are independently and incrementally definable.
4. The test tool of claim 1, wherein the service application includes a service application selected from the group of voice mail, interactive voice recognition (IVR) services, and dual tone multi frequency (DTMF) applications.
5. The test tool of claim 1, wherein the number of selectable input variables include a call rate, a length of response time, a message time length, a call distribution pattern, and a call duration.
6. The test tool of claim 5, wherein the call rate is variable in increments of milliseconds, and wherein each of the number of selectable input variables can cycle through multiple combinations in multiple iterations.

7. The test tool of claim 1, wherein the various media platform resources include resources selected from the group of memory, media channels, network interconnects, processing capability, and application module resources.
8. The test tool of claim 7, wherein the media channels include media channels in a T1 or E1 media card.
9. A media platform call simulator, comprising:
  - a processor;
  - a memory coupled to the processor;
  - a program executable in connection with the processor and the memory, the program to simulate a performance of various media platform resources handling various service applications; and

wherein to simulate a performance of various media platform resources handling various service applications the program receives a first number of input variables representing one or more application characteristics of one or more service applications, and wherein the program receives a second number of input variables representing configurable media platform resources.
10. The simulator of claim 9, wherein the first number of input variables representing one or more application characteristics can define:
  - a call distribution pattern which varies over time during a testing routine;
  - a call duration which varies over time during a testing routine;
  - one or more message lengths associated with different activities in a particular service application; and
  - one or more length of response times associated with the different activities of a particular service application.
11. The simulator of claim 9, wherein the second number of input variables representing configurable media platform resources can define:
  - a number of available media channels;
  - an amount of processing resources;
  - a number of network connections; and

an amount of memory resources.

12. The simulator of claim 9, wherein first and the second number of input variables are independently and incrementally definable.

13. The simulator of claim 9, wherein the program simulates a performance of both call signaling and call media stream.

14. The simulator of claim 13, wherein the program simulates the performance of both call signaling and call media stream across multiple T1 media cards and at least a thousand DS0s.

15. The simulator of claim 9, wherein the program outputs categorized performance report data.

16. The simulator of claim 15, wherein the categorized report data can be organized according to a number of performance criteria, wherein the performance criteria include:

a pattern of available network bandwidth usage;

a pattern memory usage;

a pattern of processor usage; and

a latency measurement per each activity associated with a connection, the latency measurement can be separated by service connection type, as well as an average latency per connection and average latency for all connections by service connection types.

17. A simulation system, comprising:

a processor;

a memory coupled to the processor;

means for simulating one or more application characteristics of one or more service applications; and

means for simulating configurable media platform resources.

18. The simulation system of claim 17, wherein the means for simulating one or more application characteristics of one or more service applications includes a program executable on the system to provide a number of independent input variables associated with the one or more application characteristics of one or more service applications.
19. The simulation system of claim 17, wherein the means for simulating configurable media platform resources includes a program executable on the system to provide a number of independent input variables associated with configurable media platform resources.
20. A media platform produced using the simulation system of claim 17, wherein the media platform handles a number of service applications without under-utilizing the resource capability of the media platform.
21. A method for testing a media platform, comprising:
  - selecting a number of scalable variables to define one or more application characteristics for different service applications;
  - executing a testing routine which implements the selected number of scalable variables;
  - measuring the performance of various media platform resources while executing the testing routine;
  - analyzing the measured performance; and
  - providing categorized performance report data.
22. The method of claim 21, wherein selecting a number of scalable variables to define one or more application characteristics includes:
  - independently and incrementally defining the number of scalable variables such that multiple increments can be defined for each of the number of variables; and
  - cycling through multiple combinations of the incrementally defined number of scalable variables in multiple iterations while executing the testing routine.

23. The method of claim 21, wherein executing a testing routine includes executing a repeatable testing routine useable for a number of different service applications and executing a variable testing routine based on the number of scalable variables.
24. The method of claim 21, wherein a different set of the number of scalable variables can be associated with the different service applications, and wherein the different service applications can be selected from a memory.
25. The method of claim 21, wherein analyzing the measured performance includes analyzing the measured performance according to a number of criteria, wherein the criteria includes:
- a pattern of available network bandwidth usage;
  - a pattern memory usage;
  - a pattern of processor usage; and
- a latency measurement per each activity associated with a connection, the latency measurement can be separated by service connection type, as well as an average latency per connection and average latency for all connections by service connection types.
26. A method for testing a media platform, comprising:
- providing a first number of input variables representing one or more application characteristics of one or more enhance service applications;
  - providing a second number of input variables representing configurable media platform resources;
  - performing a simulation, based on the first and the second input variables, to measure a performance of a media platform handling the one or more service applications thereon;
  - analyzing results from the performed simulation; and
  - providing performance report data based on a number of categorized input data.

27. The method of claim 26, wherein providing a first number of input variables representing one or more application characteristics of one or more service applications includes providing a first number of input variables selected from the group of:

- a variable number of available media channels;
- a variable amount of processing resources;
- a variable amount of network connections; and
- a variable amount of memory resources.

28. The method of claim 26, wherein providing a second number of input variables representing configurable media platform resources includes providing a second number of variables selected from the group of:

- a call rate which varies over time during a testing routine;
- a call duration which varies over time during a testing routine;
- variable message lengths associated with different activities in a particular service application; and
- a variable length of response time associated with the different activities of a particular service application.

29. The method of claim 26, wherein performing a simulation based on the first and the second input variables includes measuring simulation interactions of the one or more service applications according to configurable media platform resources.

30. The method of claim 26, wherein analyzing results from the performed simulation includes analyzing an impact on a particular set of media platform resources when running one or more service applications.

31. The method of claim 30, wherein analyzing results from the performed simulation includes analyzing an impact of the characteristics from one service application on a performance of another service application for the particular set of media platform resources.

32. A computer readable medium having a program to cause a device to perform a method that comprises:

- providing a number of input variables associated with signaling and media stream characteristics of a media platform;
- performing a test routine based on the number of input variables; and
- analyzing results of the testing routine to determine the performance capabilities of the media platform.